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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/966,692	09/28/2001	Tsutomu Yamada	YKI-0078	4078
23413	7590	12/30/2004	EXAMINER	
CANTOR COLBURN, LLP 55 GRIFFIN ROAD SOUTH BLOOMFIELD, CT 06002			MULPURI, SAVITRI	
			ART UNIT	PAPER NUMBER
			2812	

DATE MAILED: 12/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/966,692	YAMADA ET AL.	
	Examiner	Art Unit	
	Savitri Mulpuri	2812	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 and 27-34 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19-24, 30, 32 and 34 is/are allowed.
- 6) ☒ Claim(s) 1-18, 27-29, 31, 33 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12.22.2003 11/26/2</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/19/2004 has been entered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5, 7-9, 11-17, 27-29, 31,33 are rejected under 35 U.S.C. 102(b) as being anticipated by Hirano et al (6,215, 250).

Claims 1-5, 7-9, 11-17, 27-29, 31,33 are rejected under 35 U.S.C. 102(e) as being anticipated by Ikuko et al (6,255,775) or Ikuko et al discloses a method of forming an individually patterned layer in plurality of region of the substrate, comprising the steps of:

disposing between the substrate and layer material source, a mask including an opening corresponding to one or more of the plurality region where said layer is formed;

causing a material from the layer material source to attach to a first region of the substrate through the opening, while relative positions of the substrate, the mask, the material source are set to a final positional relationship;

causing relative movement between the mask, material source and the substrate the substrate to change relative positions of the substrate, the mask and the source material; from the first positional relationship to the second positional relationship;

causing the material to attach to a second region of the substrate through the opening, while relative positions of the substrate, the mask, and the source material are set to second positional relationship (see fig. 9 a-9d and related description ant).

Ikuko et al further discloses linearly extending source "11, 12, 13" plurality of material sources, elongated in a direction perpendicular to a direction of the relative movement between the mask, material source and the substrate. Ikuko et al teaches electroluminescent materials deposited on the substrate "5,6,7" (see fig. 3 and related description). With respect to claims 11, 33, Ikuko

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et al further teach emissive material layer for each color for each plurality of pixels.

Hirano et al also discloses all the claimed limitations including forming plurality of electroluminescent materials "25 a, 25 b, 25 c" in different regions by using single mask by sliding the mask with respect fixed substrate (see fig. 2 A-2F and fig 3. col. 7, lines 46- 67).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikuko (6,255,775) or Hirano (6,215, 250) in combination with Tonucci et al (6,087,274)

Ikuko et al discloses a method of forming an individually patterned layer in plurality of region of the substrate, comprising the steps of:

disposing between the substrate and layer material source, a mask including an opening corresponding to one or more of the plurality region where said layer is formed;

causing a material from the layer material source to attach to a first region of the substrate through the opening, while relative positions of the substrate, the mask, the material source are set to a final positional relationship;

causing relative movement between the mask, material source and the substrate the substrate to change relative positions of the substrate, the mask and the source material; from the first positional relationship to the second positional relationship;

causing the material to attach to a second region of the substrate through the opening, while relative positions of the substrate, the mask, and the source material are set to second positional relationship (see fig. 9 a-9d and related description ant).

Ikuko et al further discloses linearly extending source "11, 12, 13" plurality of material sources, elongated in a direction perpendicular to a direction of the relative movement between the mask, material source and the substrate. Ikuko et al teaches electroluminescent materials deposited on the substrate "5,6,7" (see fig. 3 and related description). With respect to claims 11, 33, Ikuko et al further teach emissive material layer for each color for each plurality of pixels.

Hirano et al also discloses all the claimed limitations including forming plurality of electroluminescent materials "25 a, 25 b, 25 c" in different regions by

using single mask by sliding the mask with respect fixed substrate (see fig. 2 A-2F and fig 3. col. 7, lines 46- 67).

Neither Ikuko et al nor Hirano et al do not disclose using mask made of semiconductor material. Tonucci et al teaches depositing nanosize patterning process by providing silicon carbide substrate with plurality of holes and depositing the material through the holes with accuracy and precision by relative movement of the mask and the substrate. Tonucci et al further discloses using the position technique for organic materials. (see col. 60-67, fig. 2 B-2 C and claims 2, 23). It would have been obvious to one of ordinary skill in the art to use silicon carbide mask with plurality of openings to deposit material over the substrate in the invention of Ikuko et al or Hirano et al because of the advantage of depositing in small area of the large substrate with accuracy and precision as taught by Tonucci et al.

Claims 19-24, 30, 32, 34 are allowed.

Allowable Subject Matter

The following is an examiner's statement of reasons for allowance: prior art neither teach nor suggest teaching mask having smaller area than said substrate to cover one or more plurality of pixels of said substrate for forming color emissive display device.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

Applicant's arguments with respect to claims 1-24, 27-30 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Savitri Mulpuri whose telephone number is 571-272-1677. The examiner can normally be reached on Mon-Fri from 8 a.m. to 4.30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Niebling, can be reached on 571-272-1679. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read 'Savitri Mulpuri', with a stylized, flowing script.

Savitri Mulpuri
Primary Examiner
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